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EJ ANALYSIS MAP



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

176676

MEMORANDUM

REPLY TO THE ATTENTION OF

DATE: MAY 06 2002

SUBJECT: ACTION MEMORANDUM - Request for a Time Critical Removal Action at the United Iron and Metal Site, East St. Louis, St. Clair County, Illinois
Site ID # B5Z2 - OU2

FROM: Kevin R. Turner, On-Scene Coordinator
Emergency Response Section 2
Michael D. Harris, On-Scene Coordinator
Emergency Response Section 2
Thomas Cook, On-Scene Coordinator
Emergency Response Section 3

TO: William E. Muno, Director
Superfund Division

THRU: Richard Karl, Chief *Thomas Cook*
Emergency Response Branch, *TK*
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request approval to expend up to \$389,356 to abate an imminent and substantial threat to public health and the environment present at the United Iron and Metal site (United Iron), East St. Louis, St. Clair County, Illinois (Latitude - 38° 37' 86.3" North and Longitude - 90° 09' 32.9" West). This action is necessary to mitigate the immediate threat to public health and the environment posed by the presence of uncontrolled hazardous substances on site, including soils containing lead.

The response action proposed herein will mitigate site conditions by removal and off-site disposal of the contaminated soil. The high levels of lead in surface soil at concentrations considered hazardous and the site's proximity to residential properties and other businesses requires that this action be classified as a time critical removal. The project will require an estimated 25 working days to complete.

There are no nationally significant or precedent setting issues associated with the United Iron and Metal site. The United Iron and Metal site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# ILN000508216

A. Site Description

1. Site history

The current owner of the site is Ms. Sandy Schmidt, who bought the property in late 1997 or early 1998 from an auction of the bankrupt Lefton Iron and Metal Company. The property was part of a trustee sale of assets conducted at the Federal Court in East St. Louis. The current owner bought the property after the facility ceased operation and has not conducted any activities on-site.

Lefton Iron and Metal (Sam Lefton now deceased) owned the property since the late 1950s or early 1960s and operated the Lefton Rail Division on site. The Rail Division primarily accepted old rail sections and cut them into manageable sizes for off-site recycling. Other types of scrap metal processing also appear to have occurred on-site.

2. Physical location

The United Iron site is located at 303 South 11th Street in East St. Louis, St. Clair County, Illinois. The site is located north of McMasland Avenue between South 10th and South 11th Streets in an area of vacant parcels, residential, industrial, commercial and institutional properties. A public housing development, various dilapidated buildings, a large trucking facility, and residential homes surround the former facility. St. Mary's Hospital is located about 0.75 mile northwest of the site. Lincoln Middle School, a children's daycare facility and a community center are all located within 700 feet of the site in an easterly direction.

According to the Region 5 Superfund Environmental Justice Analysis, the group of residents closest to the site reside in census tract #5009, block group #7. This block group has a total population of 1589. Of the 1589, 100% are classified as minority. Approximately 91% of the families residing in this block group have an income of less than the established State low income level. The demographic conditions indicate an environmental justice priority for the community around this site.

3. Removal Site evaluation

Site assessment activities were conducted at the United Iron and Metals site on several occasions in the year 2001. Through a grant given by the U.S. EPA's Gateway Initiative, the Illinois Department of Public Health (IDPH) first collected soil lead data associated with this site and the surrounding residential properties. IDPH then shared its data with St. Mary's Hospital, the Metro-East Lead Collaborative Partnership and the U.S. EPA. Further site characterization and

data collection was conducted through funding supplied to the U.S. Army Corps of Engineers (ACOE) from the U.S. EPA, Region 5, Brownfields Section.

The sample collection activities conducted by the ACOE were structured to satisfy the data collection objectives listed below:

1. Verify the results of Phase I and Phase II soil sampling conducted by the IDPH.
2. Collect soil samples from the suspected former facility and the surrounding neighborhood in locations that were either not sampled by IDPH or where the sampling spacing was too large to draw conclusive results.
3. Characterize the soil and delineate the lateral extent of lead and other contamination at the United Iron site

ACOE was tasked to document both on-site and off-site conditions, collect soil samples, and prepare and submit samples for laboratory analysis. A NITON™ x-ray fluorescent (XRF) spectrometer was used to first screen the soils before actual soil samples were collected for laboratory analysis. The XRF spectrometer readings (with 95 percent upper and lower confidence limits) were taken at each predetermined location both on-site and within the surrounding neighborhood on bare soil that had been cleared of vegetation and humus. Because this former facility was a former scrap metal processing facility the XRF was used to screen for a greater spectrum of contaminants than just lead.

The field crew took XRF spectrometer readings for lead, chromium, nickel and other heavy metals, which were compared with the U.S. EPA Region 9 preliminary remediation goals (PRGs) for residential soil. The guidelines below were generally followed, but the samples submitted for laboratory analysis and parameters analyzed for were chosen by the on-site ACOE representative in consultation with the U.S. EPA. Locations where XRF spectrometer readings for lead or chromium which exceeded the PRG of 400 milligrams per kilogram (mg/kg) were marked as potential sampling points for laboratory analysis of Resource Conservation and Recovery Act (RCRA) metals.

At one sampling location, which had one of the highest XRF spectrometer readings (75,161 ppm for lead and 4,048 ppm for chromium), soil samples were screened with the XRF spectrometer down to 6 inches below ground surface (bgs), and a sample from this location was analyzed for RCRA metals, toxicity characteristic leaching procedure (TCLP) lead, polychlorinated biphenyls (PCB), semivolatile organic compounds (SVOC), volatile organic compounds (VOC), and pH.

On August 15th and again on October 9th, 2001, the field crew collected samples using a stainless-steel auger and homogenized in pie pans for field screening at the ground surface and in increments of 6 inches down to 12 inches bgs. The auger was decontaminated after collection of each sample using Alconox and water with a final, deionized water rinse. Selected samples were

placed in sample containers and submitted for laboratory analysis based on the field screening results and at the discretion of the ACOE representative. Samples were stored on ice and ~~submitted to a ACOE approved laboratory.~~

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the United Iron and Metal site present an imminent and substantial threat to the public health, welfare, and/or the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP). Section 300.415, Paragraph (b)(2). 40 C.F.R. § 300.415(b)(2)(I), (iii) and (v), respectively, specifically allows removal actions for:

- 1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

The site is surrounded by residential, industrial, commercial and institutional properties. St. Mary's Hospital is located about 0.75 mile northwest of the Site. Lincoln Middle School, a children's daycare facility and a community center are all located within 700 feet of the site in an easterly direction and Lilly-Freeman Grade School is located approximately 0.75 miles from the Site. The IDPH documented the presence of lead in soil above health standards. St. Mary's Hospital, in conjunction with the East St. Louis Lead Collaborative Partnership, provided blood lead screening to the children at Lilly-Freeman Grade School. The health concerns at this site are related to the uncontrolled access to the property and the evidence of trespassing on the property by the local population, potentially exposing young children, pregnant women and elderly individuals to high levels of lead contamination.

The effects of lead exposure are more severe for young children and the developing fetus through exposure to a pregnant woman. The harmful effects of lead included premature births, lower birth weight, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. In adults, lead increases blood pressure, induces anemia as a result of the inhibition of hemoglobin synthesis, decreases reaction time, affects memory, and damages the male reproductive system. Lead is also considered by U.S. EPA to be a class B2 or probable human carcinogen. Toxicity information is summarized in the references, ATSDR, 1993 and U.S. EPA, 2000.

Lead was found wide spread throughout the site with most of the area above the U.S. EPA site-specific action level of 400 ppm for residential land use scenarios. The XRF data revealed elevated concentrations of lead on-site including concentrations of 75,161 ppm, 16,192 ppm and 10,899 ppm, and the laboratory data revealed levels at 60,000 ppm, 52,000 ppm and 20,000 ppm. Within the nearby residential neighborhood, lead was discovered at 2,659 ppm, 1,460 ppm and 1,340 ppm with the XRF and 2,300 and 2,000 ppm from laboratory analysis. In addition, St. Mary's Hospital conducted blood lead screening at the Lilly-Freeman Grade School. The results of the blood lead screening showed that eight percent (22 students out of 289 tested) had blood

lead levels greater than 10 micrograms per deciliter ($\mu\text{g/dL}$) and 42 percent (121 students out of 289 tested) between 5 and 9 $\mu\text{g/dL}$. The highest recorded child blood lead level at the Lilly-Freeman Grade School was at 25 $\mu\text{g/dL}$.

In Illinois, the Illinois Department of Public Health guidelines state that any child with a blood lead level between 10 and 14 $\mu\text{g/dL}$ is tested again in a few months. If the confirmed blood level is at least 15 $\mu\text{g/dL}$, case follow-up is conducted. St. Mary's Hospital has agreed to take on the responsibility to continue testing within East St. Louis. Blood lead levels from the students ranged from 0 to 25 $\mu\text{g/dL}$. IDPH recommends that remediation efforts be initiated on the basis of the high levels of lead found in the surface soils and based upon the number of grade school students in the immediate area who tested above the recommended blood screening levels. Since the neurological effects on young children and the developing are considered to be irreversible, even short term exposures to elevated lead levels are of a public health concern.

References:

ATSDR. 1993. Toxicological Profile for Lead. Agency for Toxic Substances and Disease Registry, Division of Toxicology. Atlanta, GA. U.S. Department of Health and Human Services, Public Health Service.

U.S. EPA. 2000. Integrated Risk Information System (IRIS). Database information located at <http://www.epa.gov/iris/subst/index.htm>. U.S. Environmental Protection Agency.

- 2) Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release;

The IDPH and U.S. EPA XRF and analytical data documented total lead levels to be greater than 75,000 ppm at the surface and greater than 16,000 ppm at a depth of six inches. The additional data collection activities confirmed IDPH sampling results and further documented that elevated levels of lead exist on the Site.

Though the site has a fence, it is dilapidated and serving no real purpose. In addition there are no warning signs or other barriers to prevent public access. During the Site Assessment it was observed that children, adults, and others use the former United Iron property as a place to play or spend time. Due to the heavy foot traffic and a general lack of good ground cover in many areas, people could cause dust particles containing lead to further migrate off-site via their shoes and to the surrounding residential neighborhoods.

- 3) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

During the various site assessment activities, heavy foot traffic was observed throughout the former United Iron property resulting in reduced ground cover and exposed soil. IDPH and U.S. EPA have documented that high levels of lead exists on the ground surface and down to at least a six inch depth. Heavy rains may cause further migration of contaminants off-site. Winds could cause dust particles containing heavy metals to migrate into the surrounding community. These weather conditions could result in a continued release of lead described herein to the surrounding soil and air.

- 4) ~~The availability of other appropriate federal or state response mechanisms to respond to the release.~~

As a member of the East St. Louis Lead Collaborative Partnership, the U.S. EPA has been asked to assist with clean up efforts at the United Iron and Metal site. This site, as well as other sites in the area, are a part of a cooperative effort to limit exposure to elevated lead for sensitive populations in East St. Louis. The Illinois Department of Public Health and the U.S. EPA - Region 5 Gateway Initiative asked the U.S. EPA - Region 5, Removal Program to proceed with a time-critical removal action at the United Iron site. The City of East St. Louis has also indicated its desire to see this site cleanup completed and to return the property to productive use. Neither the State of Illinois nor the City of East St. Louis has the funds to undertake removal of the elevated lead found at the site.

IV. ENDANGERMENT DETERMINATION

Given the conditions at the United Iron and Metal site, the nature of the hazardous substances on site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response actions selected in this Action Memorandum, present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The OSC proposes to undertake the following actions to mitigate threats posed by the presence of hazardous substance at the United Iron and Metal site:

- 1) Develop and implement a Site Health and Safety Plan, including an air monitoring plan and site contingency plan;
- 2) Develop and implement a site security plan;
- 3) Characterize, remove and properly dispose of hazardous substance and wastes

(contaminated soils) located at the site in accordance with U.S. EPA's Off-Site Rule (40 CFR 300.440):

- 4) Backfill the excavated areas with clean material and topsoil. Restore and vegetate to prevent soil erosion;

The OSC has initiated planning for provision of post-removal site control consistent with the provisions of Section 300.41 5(I) of the NCP. The nature of this removal action, as well as the complete removal of all hazardous substance from the site, will eliminate the need for any post removal site control.

The estimated costs to complete the above activities are summarized below. These activities will require an estimated 25 working days to complete.

The detailed cleanup contractor cost estimate is presented in Attachment A and estimated project costs are summarized below:

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

Cleanup Contractor	\$287,389
Cleanup Contractor Contingency (20%)	\$ 57,477
START	<u>\$ 16,500</u>
 TOTAL EXTRAMURAL COSTS	 \$361,366

INTRAMURAL COSTS:

U.S. EPA Direct Costs	\$ 9,090
\$30 X [(300 Regional Hours)+ 3 HQ Hours]	
 U.S. EPA Indirect Costs	 <u>\$ 18,900</u>
\$63 X (300 Regional Hours)	
 TOTAL INTRAMURAL COSTS	 \$ 27,990
	=====
TOTAL REMOVAL PROJECT CEILING ESTIMATE	\$ 389,356

The response actions described in this memorandum directly address the actual or threatened release at the site of a hazardous substance, or of a pollutant, or of a contaminant which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the

extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable. A letter was sent to Bruce Everetts of the Illinois EPA on May 3, 2002 requesting that the Illinois EPA identify State ARARs. Any State or Federal ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Continued risk to public health and the environment will result if no action of delayed action ensues.

VII. OUTSTANDING POLICY ISSUES

None.

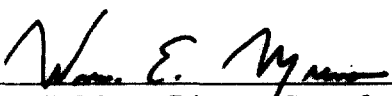
VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in an Enforcement Confidential Addendum (see Attachment B).

IX. RECOMMENDATION

This decision document represents the selected removal action for the United Iron and Metal site, East St. Louis St. Clair County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site (see Attachment C). Conditions at the site meet the criteria of the NCP, 40 C.F.R. § 300.415 (b)(2) for a removal action, and I recommend your approval of the proposed removal action. The total estimated project ceiling, if approved, will be \$389,356. Of this, an estimated \$361,366 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: _____


William E. Muno, Director Superfund Division

DATE: _____

5/6/02

DISAPPROVE: _____

William E. Muno, Director Superfund Division

DATE: _____

Attachments:

- A Detailed Cleanup Contractor Estimate
- B Enforcement Confidential Addendum
- C Administrative Record Index
- D. EJ Analysis

cc: K. Mould, U.S. EPA HQ, 5202G
M. Chezik, U.S. Department of Interior, **w/o Enf. Addendum**
B. Everetts, IL EPA, **w/o Enf. Addendum**
R. Cipriano, IL EPA, **w/o Enf. Addendum**
S. Davis, IL DNR, **w/o Enf. Addendum**

BCC PAGE

**UNITED IRON & METAL SITE
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS**

**HAS BEEN REDACTED
(1 PAGE)**

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

Attachment A
DETAILED CLEANUP CONTRACTOR ESTIMATE
UNITED IRON AND METAL SITE
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS
APRIL 2002

The estimated cleanup contractor costs necessary to complete the removal action at the United Iron and Metal site are as follows:

Personnel	\$83,938.68
Equipment	34,576.00
Subcontractors	54,575.00
Transportation and Disposal	<u>114,300.00</u>

TOTAL	\$287,389.68
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ATTACHMENT B

**ENFORCEMENT ADDENDUM⁵
APRIL 2002**

**UNITED IRON AND METAL SITE
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS**

**ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY**

(REDACTED 1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT C

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

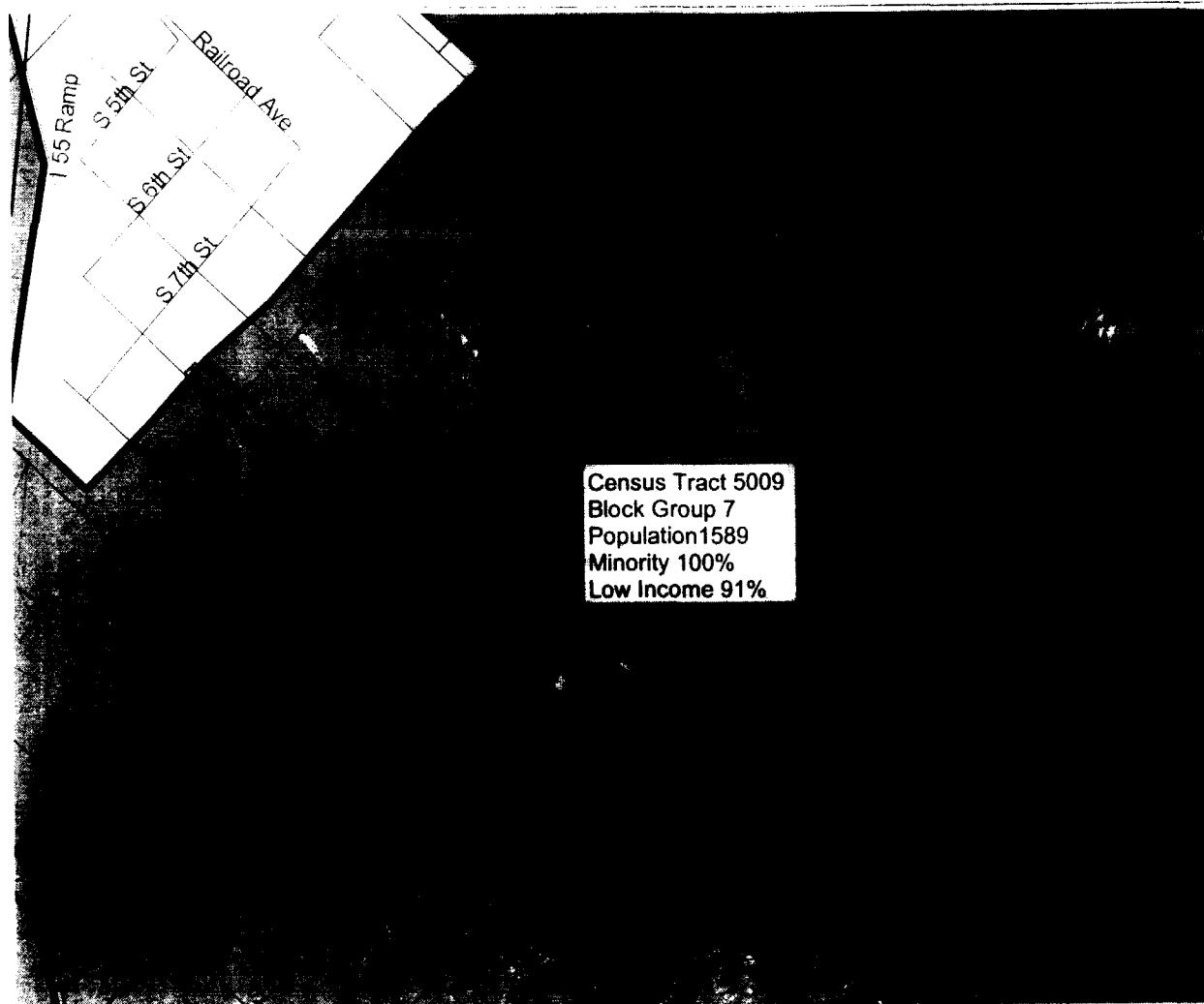
ADMINISTRATIVE RECORD FOR UNITED IRON AND METAL SITE EAST SAINT LOUIS, ST. CLAIR COUNTY, ILLINOIS

ORIGINAL
APRIL 23, 2002

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	00/00/00	Turner, K., M. Harris & T. Cook, U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Request for a Time- Critical Removal Action at the United Iron and Metal Site (PENDING)	

Region 5 Superfund EJ Analysis

United Iron & Metal Site E. St. Louis, IL



Census Tract 5009
Block Group 7
Population 1589
Minority 100%
Low Income 91%

EJ Identification

Low Income and Minority Less than State Average

Low Income or Minority at or Greater than State Average

Low Income or Minority 2 Times or Greater than State Average
[meets Region 5 EJ Case criteria]

Site Location

Block Group Boundary

Region 5 EJ Case Criteria for Illinois

Minority: 50% or greater

Low Income: 54% or greater

0 0.2 0.4 0.6 0.8 Miles

U.S. EPA Region 5
Superfund Office

Date of Map: 1/31/02

Source of Map: 1990 Census Data